GEOLOGIC TIME SCALE

	RELATIVE GEOLOGIC TIME			TIME in millions of years before present	TIME OF APPEARANCE OF DIFFERENT FORMS OF LIFE
	Era	Period	Epoch		
Age of Mammals	Cenozoic	Quaternary	Holocene		Historic record in California, 200 years Post-glacial period
				0.011*	
			Pleistocene		Ice age, evolution of man.
				1.5-2	
		Tertiary	Pliocene		Age of mammoths.
				5–7	
			Miocene		Spread of anthropoid apes.
				23–26	
			Oligocene		Origin of more modern families of mammals, grazing animals.
				37–38	
			Eocene		Origin of many modern families of mammals, giant mammals.
				53–54	
			Paleocene		Origin of most orders of mammals, early horses.
				65	
Age of Reptiles	Mesozoic	Cretaceous			Appearance of flowering plants; extinction of dinosaurs at end; appearance of a few modern orders and families of mammals.
				136	
		Jurassic			Appearance of some modern genera of conifers; origin of mammals and birds; height of dinosaur evolution.
				190–195	
		Triassic			Dominance of mammal-like reptiles.
				225	
Age of Invertebrates	Paleozoic	Permian			Appearance of modern insect orders.
				280	
		Carboniferous Systems			Dominance of amphibians and of primitive tropical forests which formed coal; earliest reptiles.
				320	
					Earliest amphibians.
				345	
		Devonian			Earliest seed plants; rise of bony fishes.
				395	
		Silurian			Earliest land plants.
				430–440	
		Ordovician			Earliest known vertebrates.
				500	
		Cambrian			Appearance of most phyla of invertebrates.
				570	
	Precambrian				Origin of life; algae, worm burrows.
				4,500	Estimated age of earth.

Modified from U.S. Geological Survey, Geologic Names Committee, 1972, and G. Ledyard Stebbins, Processes of organic evolution, 1966, Prentice-Hall, Inc., Englewood Cliffs, New Jersey.

* 11,000 years. Ziony et al., 1974, U.S. Geological Survey Map MF-585.